

Date: Sun, 3 Oct 93 04:30:32 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@UCSD.Edu
Reply-To: Ham-Space@UCSD.Edu
Precedence: Bulk
Subject: Ham-Space Digest V93 #44
To: Ham-Space

Ham-Space Digest Sun, 3 Oct 93 Volume 93 : Issue 44

Today's Topics:

 * SpaceNews 04-Oct-93 *
 Call for Abstracts (SPACECAST 2020) (2 msgs)

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Fri, 1 Oct 1993 15:19:20 GMT
From: sdd.hp.com!spool.mu.edu!agate!library.ucla.edu!news.mic.ucla.edu!
unixg.ubc.ca!nntp.cs.ubc.ca!alberta!adec23!ve6mgs!usenet@network.ucsd.edu
Subject: * SpaceNews 04-Oct-93 *
To: ham-space@ucsd.edu

SB NEWS @ AMSAT \$SPC1004
* SpaceNews 04-Oct-93 *

BID: \$SPC1004

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SpaceNews
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MONDAY OCTOBER 4, 1993

SpaceNews originates at KD2BD in Wall Township, New Jersey, USA. It is

published every week and is made available for unlimited distribution.

* NASA NEWS *

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Launched in October, 1989, the Galileo spacecraft has chalked up another success on its way to Jupiter. On September 22, the spacecraft played back a high-resolution picture of the asteroid Ida. The telemetry data rate has been reduced from 40 to 10 bits per second owing to increasing distance. The higher rate will return for a few months in 1994 when Galileo will playback more Ida data.

Galileo is scheduled to go into orbit around Jupiter and relay data from a probe in its atmosphere on December 7, 1995.

Currently, spacecraft conditions are excellent. Since the high-gain antenna is still only partly deployed, controllers plan to use the low gain antenna for the upcoming Jupiter mission.

As the Magellan spacecraft continues in a gravity-mapping orbit around Venus, the spacecraft's conditions are very good. Magellan was able to enter its current orbit by aerobraking, an experimental operation which was completed between May and August of this year. Magellan's precision tracking is providing data on the planet's gravitational field.

[Info via NASA]

* OSCAR-11 UPDATE *

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UoSAT-OSCAR-11 was recovered from an OBC crash last Saturday (18 September).

Controllers believe that the UO-11 anomaly was caused by two factors: (1) the gradual precession of the orbit plane to a position normal to the sun vector and (2) modifications to the FORTH software magnetorquing routines.

Over the course of its 9.5 year mission, UO-11's orbit has drifted. The satellite is now in a 6 AM / 6 PM sun synchronous orbit. This means that the satellite is always in sunlight. It also means that gravity gradient lock is essential for good power generation. With the sun in the orbit-normal, some other quasi-stable attitudes have particularly poor power generation. During modifications to the ancient FORTH diary operating system, an incorrect sign inversion was applied to magnetometer data. This led to non-nominal attitude, which led to poor power generation. Eventually, the power system started to "shed loads" starting with the transmitters and moving to the computers. Hence the OBC 1802 and DCE NSC800 went down. Generally, one or the other of the computers is essential to being able to command UO-11, hence controllers were unable to command

until the 2-meter beacon was automatically shut down.

Long-time UoSAT-2 buffs will be interested to know that the spacecraft's new orbit plane makes the satellite warmer. This seems to have restored to operation an intermittent data detector circuit. It was the failure of this circuit shortly after launch in 1984 which lead to the 3-month loss of UoSAT-2.

G0SYX and the other controllers at UoSAT would like to express their appreciation to all those individuals who provided telemetry and reception reports to the UoSAT command team following the disruption of UO-11 service.

Later bulletins will be issued as more details become available.

[Info via Jeff Ward]

* WEBERSAT NEWS *

=====

The following packet frames were copied from WEBERSAT-OSCAR-18 by KD2BD:

WEBER-1>CAST <UI>:

25-Sep-93

Spectrum every Monday.

Week 2 WOD (variable channels) at 10 seconds

59 0x3B impact

30 0x1E array V

38 0x26 -X cur

39 0x27 +X cur

40 0x28 -Y cur

41 0x29 +Y cur

kb7kc1

* NEW OSCAR NEWS *

=====

An Ariane rocket blasted off late Saturday from the Kourou Space Center on a mission to put into orbit seven satellites, officials said. The 59th

rocket of the European consortium Arianespace lifted off from its jungle launch pad at 01:45 UTC. Among those seven satellites were a cluster of new Amateur Radio communications satellites known as OSCARs.

After some consultation with AMSAT-NA, AMSAT-UK, SSTL and the other microsat owners, an agreement on the satellite numbering was reached and is as follows:

- OSCAR-24 will be skipped awaiting the final decision from Arsene. We all agree that Arsene is AO-24 but of course the request and final decision comes from RACE.
- The first Amateur microsat from V-59 to be separated is Kitsat-B that will become Kitsat Oscar 25 (KO-25).
- Itamsat and Eyesat were separated at the same time and we agree that since the Itamsat project started some two years before Eyesat, Itamsat becomes ITAMSAT Oscar 26 (IO-26) and Eyesat becomes AMRAD Eyesat 27 (AO-27).

It is not yet clear if PoSat will join the Amateur satellite family, if the decision is positive (and we all will be pleased to have this sophisticated bird on our side) it will be PoSat Oscar 28 (PO-28).

Following AOS and LOS timing we have identified Itamsat with the object V59-D. We should have all microsats identified as follows:

V59-C	22825	Eyesat (AO-27)
V59-D	22826	Itamsat (IO-26)
V59-E	22827	Kitsat-B (KO-25)
V59-F	22828	Healthsat
V59-G	22829	PoSat

At 09:11 UTC on the 26th of September 1993, upon control from Earth, the ITAMSAT PSK beacon at 435.870 MHz was turned on, and the first frames of MBL telemetry gathered. All telemetry looks nominal, and the batteries are being recharged.

The following packet frames were copied from ITAMSAT by KD2BD on 27-Sep-93 at 01:38 UTC on 435.867 MHz:

```
ITMSAT>MBLCTL <UI>:
TeHYZ/
ITMSAT>MBLCTL <UI>:
TdZ[0
ITMSAT>MBLCTL <UI>:
TcHZ[0
ITMSAT>MBLCTL <UI>:
Tbz[0
```

ITMSAT>MBLCTL <UI>:
TaHYZ0

[Info via LW2DTZ, I2KBD, and IK1SLD]

* THANKS! *
=====

Thanks to all those who sent messages of appreciation regarding SpaceNews,
especially:

AB3F

WA6WZO

KB9HRB

* FEEDBACK/INPUT WELCOMED *
=====

Mail to SpaceNews should be directed to the editor (John, KD2BD) via any
of the following paths:

FAX : 1-908-747-7107

PACKET : KD2BD @ N2KZH.NJ.USA.NA

INTERNET : kd2bd@ka2qhd.ocpt.ccur.com -or- kd2bd@amsat.org

MAIL : John A. Magliacane, KD2BD
Department of Engineering and Technology
Advanced Technology Center
Brookdale Community College
Lincroft, New Jersey 07738
U.S.A.

<<-- SpaceNews: The first amateur newsletter read in space! -=>>

/EX

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John A. Magliacane, KD2BD * /\ * Voice : 1-908-224-2948
Advanced Technology Center |/\| Packet : KD2BD @ N2KZH.NJ.USA.NA
Brookdale Community College |/\| Internet: kd2bd@ka2qhd.ocpt.ccur.com
Lincroft, NJ 07738 * \/\ * Morse : -. -.. ..--- -..

Date: Thu, 30 Sep 1993 02:05:12 GMT
From: tcsi.tcs.com!agate!library.ucla.edu!news.mic.ucla.edu!unixg.ubc.ca!
nnnp.cs.ubc.ca!alberta!adec23!ve6mgs!usenet@uunet.uu.net
Subject: Call for Abstracts (SPACECAST 2020)
To: ham-space@ucsd.edu

CALL FOR ABSTRACTS

AIR FORCE STUDY

on

Technology and Innovative Applications of Space Hardware

The United States Air Force is conducting a study to identify creative technologies and innovative applications of hardware that will support national security well into the next century. Air University at Maxwell AFB, Alabama is chairing the study, which will be called SPACECAST 2020. The product will recommend specific technologies and applications that have the greatest potential.

Included in the first phase of this effort is the solicitation of "brainstorming" abstracts from government agencies, industry, academia, and private individuals. The Air Force Institute of Technology at Wright-Patterson AFB, Ohio will handle these abstracts for the study. Abstracts are needed in three areas:

1. Emerging research technologies that, if exploited, can significantly improve the capabilities of our space systems (to include satellite design, reliability, remote sensing, data processing, power production, stealth, etc.).
2. Innovative space systems and applications for military purposes.
3. Prior studies and briefings on future military space systems.

If you have information in these areas, please provide one-page abstracts that include:

1. A brief description of the concept.
2. Your understanding of the concept's military application and associated technical risks and tradeoffs.
3. Your name and how you can be contacted.

Please remember the emphasis is on NEW or INNOVATIVE technologies and uses for systems that could be fielded by the year 2020. Also, please limit responses to one abstract per page with classification no higher than SECRET. Your support is appreciated.

Abstract submittal by 15 October 1993 is requested. However, abstracts submitted by 1 March 1994 will be included in the study.

Please submit abstracts to:

AU SPACE STUDY TECHNOLOGY TEAM
AFIT/ENA (AFIT/ENAS if abstract is classified)
2950 P STREET
WRIGHT-PATTERSON AFB OH 45433-7765

EMAIL: AUSPACE@AFIT.AF.MIL
FAX: DSN 986-7302 or (513) 476-7302
PHONE: DSN 785-7210 or (513) 255-7210

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Lt Col TS Kelso Deputy Chief, Technology Assessment Team
tkelso@afit.af.mil Spacecast 2020
auspace@afit.af.mil Air Force Institute of Technology

Date: Thu, 30 Sep 1993 02:04:56 GMT
From: iris.mbvlab.wpafb.af.mil!blackbird.afit.af.mil!afit.af.mil!
tkelso@uunet.uu.net
Subject: Call for Abstracts (SPACECAST 2020)
To: ham-space@ucsd.edu

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Deputy Chief, Technology Assessment Team
Spacecast 2020
Air Force Institute of Technology

End of Ham-Space Digest V93 #44
